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**PURPOSE** 

The National Institutes of Health (NIH) will award National Research Service Award (NRSA) institutional grants (T32) to eligible institutions to develop or enhance research training opportunities for individuals, selected by the institution, who are training for careers in specified areas of biomedical and behavioral research. The purpose of the NRSA program is to help ensure that highly trained scientists are available in adequate numbers and in the appropriate research areas and fields to carry out the nation's biomedical and behavioral research agenda.

Preapplication consultation with NIH is highly desirable, especially where predoctoral or shortterm training is planned. Contacts are listed in the section on Inquiries, below. Brief descriptions of institutional NRSA research training programs at other Public Health Service Agencies are also listed below.

**ELIGIBILITY REQUIREMENTS** 

For Institutions

Domestic non-profit private or public institutions may apply for grants to support research training programs. The applicant institution must have, or be able to develop, the staff and facilities required for the proposed program. The training program director at the institution will be responsible for the selection and appointment of trainees to receive NRSA support and for the overall direction of the program.

#### For Trainees

The individual to be trained must be a citizen or a non-citizen national of the United States or have been lawfully admitted for permanent residence (i.e., in possession of the Alien Registration Receipt Card I-551 or I-151) at the time of appointment. Individuals on temporary or student visas are not eligible.

#### **Predoctoral Trainees**

Predoctoral trainees on regular research training appointments must have received a baccalaureate degree as of the beginning date of their NRSA appointment, and must be training at the postbaccalaureate level in a program leading to the award of a doctor of philosophy of science or an equivalent degree. National Research Service Awards cannot be used to support courses which are required for the M.D., D.O., D.D.S., D.V.M., or any other similar health-professional degree. Individuals who wish to interrupt their medical, veterinary, dental, optometry or other professional school studies for a year or more to engage in full-time research training before completing their professional degrees are eligible; however, prior approval by the NIH is required before such individuals may be appointed to the NRSA institutional research training grant.

### Postdoctoral Trainees

Postdoctoral individuals must have received, as of the beginning date of the NRSA appointment, a Ph.D., M.D., D.O., D.D.S., D.V.M., O.D., D.P.M., Sc.D., Eng.D., Dr.P.H., D.N.S., or equivalent degree from an accredited domestic or foreign institution. Certification by an authorized official of the degree granting institution that all degree requirements have been met is acceptable.

Individuals with health-professional degrees appointed to postdoctoral positions are expected to engage in at least two years of research or research training beginning at the time of appointment. After one or two years of research training support, most postdoctoral trainees should be encouraged to seek support for further supervised research experience through individual awards. Such individual awards could include, but are not limited to, individual postdoctoral fellowships, Physician Scientist Awards, Dental Scientist Awards, Clinical Investigator Awards, Clinical Investigator Development Awards, or research grants. It is recognized that transfer to an individual award may not be appropriate for some postdoctoral trainees such as those engaged in research training leading to a graduate degree. In any case, the review of competing renewal applications for research training programs will include a

rigorous review of the ability of the training program to retain individual trainees for at least two years of research or research training experience. Additionally, the ability of the training program to direct postdoctoral trainees into individual support mechanisms and eventually into independent research careers will be carefully examined at review.

Short-Term Health Professional Trainees

Students enrolled in a school of medicine, osteopathy, optometry, pharmacy, chiropractic, dentistry, public health, or veterinary medicine who have completed at least one quarter and are willing to engage in full-time research training for up to three months are eligible for appointment to short-term positions on an institutional research training grant. Individuals holding an M.S., a Ph.D., or an M.D./Ph.D. degree or an equivalent graduate level research degree are not eligible for short-term training positions. Similarly, individuals matriculated in a formal program leading to an M.S., a Ph.D., an M.D./Ph.D. or a comparable graduate level research degree are not eligible for short-term training positions. Within schools of pharmacy, only individuals who are candidates for the Pharm.D. degree are eligible.

MECHANISM OF SUPPORT

**General Provisions** 

Levels of Training

Predoctoral and Postdoctoral Research Training: Applications will be accepted for predoctoral or postdoctoral research training. Predoctoral research training must be at the postbaccalaureate level and must lead to the Ph.D. or a comparable doctorate degree. Postdoctoral research training is for individuals who have received an M.D., a Ph.D. or comparable doctoral degrees. Predoctoral research training will emphasize fundamental training in the basic disciplinary areas while training at the postdoctoral level will emphasize specialized training to meet national research priorities. Training grants are a desirable mechanism for the postdoctoral training of physicians and other health-professionals whose doctoral training usually involves only limited research experience. For such individuals, the training may be a part of a research degree program, but in all cases, health-professional postdoctoral trainees should agree to engage in at least two years of research, research training, or comparable experiences beginning at the time of appointment.

### Short-Term Research Training Positions for Health-Professional Students

Beginning with the May 10, 1992 receipt date, applications for NRSA institutional research training grants which request support for regular predoctoral and/or postdoctoral research training may also request short-term positions reserved specifically to train medical or other health-professional students on a full-time basis during the summer or other "off quarter" periods. Short-term appointments are intended to provide health-professional students with opportunities to participate in biomedical and/or behavioral research in an effort to attract these individuals into research careers.

To be eligible for short-term research training positions, health- professional students must have completed at least one quarter in a program leading to a doctorate at an accredited school of medicine, osteopathy, optometry, pharmacy, chiropractic, dentistry, or veterinary medicine prior to participating in the program. Short-term positions should last at least two months but may not last longer than three months. However, back-to-back short-term appointments may be permitted. Students selected for short-term appointments are encouraged to obtain two or more periods of short-term training during the period of studies leading to their health-professional degree.

# Types of Training Permitted

NRSA research training grants may not be used to support studies leading to the M.D., D.O., D.D.S., D.V.M. or other similar health-professional degrees. However, students enrolled in health-professional doctoral degree programs may receive support for short-term research training for one or more periods lasting up to three months each. Also, students enrolled in health-professional doctoral degree programs may interrupt their health-professional studies for a year or more to engage in full-time research training before completing their professional degree.

NRSA research training grants may not be used to support residency training, which means postgraduate training for doctors of medicine, osteopathy, dentistry, optometry, podiatry, and nursing or the training of any other individual who is providing health care directly to patients where the majority of the time is spent in non-research clinical training. However, if a specified period of full-time research training is creditable toward specialty board certification, NRSA may support such postdoctoral research training provided the trainee is interested in establishing a research career. Physicians and other health-professionals accepted for a postdoctoral NRSA appointment are expected to engage in at least two years of research or research training starting at the beginning of the appointment.

Trainees are required to pursue their research training on a full-time basis, devoting at least 40 hours per week, as specified by the sponsoring institution, in accordance with its own policies. Research trainees in clinical areas are expected to devote their time to the proposed research training and to confine clinical duties to those which are a part of the research training experience.

Trainees appointed to the training program must have the opportunity to carry out supervised biomedical or behavioral research with the primary objective of extending their research skills and knowledge in preparation for a career in research.

# Duration of Support

Institutional NRSA grants may be made for competitive segments of up to five years and are renewable. Awards within an approved competitive segment are normally made in 12 month increments with support for additional years dependent on satisfactory progress and the continued availability of funds.

Trainees are customarily appointed for full-time 12 month periods. No trainee may be appointed for less than nine months except with the prior approval of the awarding unit or when health-professional students are appointed to approved short-term research training positions. No individual trainee may receive more than 5 years of aggregate NRSA support at the predoctoral level and 3 years of aggregate NRSA support at the postdoctoral level, including any combination of support from institutional training grants and individual fellowship awards. Any exception to the total duration of trainee support at either the predoctoral or postdoctoral level requires a waiver from the director of the awarding component at the NIH. The grounds for approving extensions of support can be found in the document titled National Research Service Awards - Guidelines for Individual Awards - Institutional Grants, NIH Guide for Grants and Contracts, Vol. 13, No. 1, January 6, 1984.

# Recruitment and Appointment of Trainees

The primary objective of the NRSA program is the preparation of qualified individuals for careers in biomedical and behavioral research. Within the framework of the program's longstanding commitment to excellence and projected needs for investigators in particular areas of research, it is important that attention also be given to recruiting individuals from minority groups that are underrepresented nationally in the biomedical and behavioral sciences.

Application information on plans for the recruitment of trainees should include a description of steps to be taken for the recruitment of individuals from underrepresented minority groups. Also, competing continuation applications should include cumulative information on the recruitment of minority trainees during the previous award period and the subsequent career development of all trainees, including information about their minority status. Failure to include an adequate plan for recruitment or a report on minority recruitment from the previous award period may result in a delay of funding until that information is provided. Also program directors should be aware of a recruitment pool in the nurse community which may have been overlooked. NRSA program directors should make information about their programs available to the nursing profession.

Consistent with the objectives of the NRSA programs and the focus on the placement of former research trainees into research careers, it has been shown